

CHELISHCHEV, B.A., inzh.

Pneumatic piston servomechanism. Mekh. i avtom. proizv. 17
no.12:26-28 D*63. (MIRA 17:2)

CHELISHCHEV, B.A., inzh.

Tracing pneumatic hydraulic drive. Mekh. i avtom. proizv.
19 no.9:15-16 S '65. (MIRA 18:9)

L 14445-66 EWT(d)/EWP(h)/EWP(l)

ACC NR: AP6002966

SOURCE CODE: UR/0286/65/000/024/0134/0135

INVENTOR: Chelishchev, B. A.; Shramko, V. D.; Kokorev, V. I.

ORG: none

14.55 31
23
TITLE: A manipulator for holding and transferring workpieces. Class 49, No. 177256
[announced by the Experimental Scientific Research Institute for Construction of
Stamping and Forging Machines (Eksperimental'nyy nauchno-issledovatel'skiy institut
kuznechno-pressovogo mashinostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 134-135

TOPIC TAGS: material handling, remote handling equipment, pneumatic servomechanism

ABSTRACT: This Author's Certificate introduces a manipulator for holding and transferring workpieces. The device contains a stand made in the form of a column which is connected to the tong assembly through a system of hinged levers, e.g. by vacuum suction devices equipped with a pneumohydraulic servodrive and a pneumatic programmed remote control system. The manipulator is designed for picking up and transferring workpieces to any point within its servicing radius and orienting them in the proper

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UDC: 621.86.062

2

L 14445-66

ACC NR: AP6002966

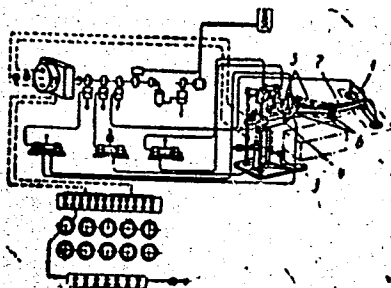
position. The tong assembly is connected by levers to a transverse member mounted in the column so that it can be moved in the vertical direction. The lever system is equipped with a chain drive with sprockets mounted on the hinged axles in the system. These sprockets may be used for individual control of each lever and for orienting the tong assembly in the proper position.

SUB CODE: 13/ SUBM DATE: 27Dec63

Card 2/3

L 14445-66

ACC NR: AP6002966



1 - tong assembly; 2 - levers; 3 - column; 4 - transverse member; 5 - chain drive; 6 - sprocket.

cc

Card 3/3

CHELISHCHEV, N.F.

Geological position, morphology and composition of gabbro
pegmatites of the Monchegorsk pluton. Krat. soob. IMGRE
no.1:136-138 '60. (MIRA 17:3)

CHELISHCHEV, N.F.

Two genetic pegmatite groups in the Monchegorsk pluton. Trudy
INGRE no.8:249-263 '62. (MIRA 16:1)
(Murmansk Province—Pegmatites)

CHELISHCHEV, N.F.

Pegmatoid and veined hydrothermal formations in the
Pervoural'sk titanomagnetite deposit. Trudy IMGRE no.16:
180-188 '63. (MIRA 16:8)

CHELISHCHEV, N.F.

Interrelation of pegmatites and niccolite mineralization in
the Nittis-Kumuzh'ya-Travyanaya massif of the Kola Peninsula.
Trudy IMGRE no.16:189-195 '63. (MIRA 16:8)

CHELISHCHEV, N.F.; KUZNETSOV, V.A.; DIKOV, Yu.P.

Experimental studies of the crystallization process of silicate
melts corresponding to the composition of basic rocks. Dokl.
AN SSSR 152 no.3:69-712 S '63. (MIRA 16:12)

1. Institut mineralogii, geokhimii i kristalloghimii redkikh
elementov Ministerstva geologii i okhrany neдр SSSR. Predstavleno
akademikom D.S.Korzhinskim.

CHELISHCHEV, N.F.

Crystallization of basaltic melt in a dry system and under the pressure of water vapor. Dokl. AN SSSR 161 no.6:1419-1421 Ap '65. (MIRA 18:5)

1. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Submitted December 21, 1964.

CHELISHCHEV, N.F.

Diffusion effect caused by pressure gradient. Dokl. AN SSSR 163 no.2:
479-482 J1 '65. (MIRA 18:7)

1. Institut mineralogii geokhimii i kristalloghimii redkikh elementov.
Submitted March 30, 1965.

KISEL'GOF, M.L., kand. tekhn. nauk; CHELISHCHEV, N.V., inzh.; LIPSHITS,
E.V., inzh.

Study of the crushability of fuels in hammer mills. Teplo-
energetika 12 no.7:35-41 J1 '65. (MIRA 18:7)

1. Vsesoyuznyy teplotekhnicheskii institut.

CHELISHVILI, M. L.

CHELISHVILI, M. L. - "Magnetic Field of Models of Geological Structures." Sub
28 May 52, Geophysics Inst, Acad Sci USSR. (Dissertation for the Degree
of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

CHELISHVILI, M. L.

USSR/Geophysics- Dissertations

Jan/ Feb 53

" Four Candidates' Dissertations, Defended at Sessions of the Scientific Council of the Geophysics Institute, Academy of Sciences, USSR, in 1952"

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, p 96

N. A. Vvedenskaya defended " Investigation of Deep Earthquakes in Central Asia" before Dr Phys-Math Sci V. F. Bonchkovskiy, and Cand Phys-Math Sci Ye. A. Koridalin on 11 Jun 52. K. K. Zapol'skiy defended "Apparatus and Procedure for Studying Physical Peculiarities of Seismic Waves in Real Mediums" before Dr Phys-Math Sci Ye. F. Savarenskiy, Cand Phys-Math Sci A. M. Epinat'yeva and Cand Phys-Math Sci Ye. V. Karus on 18 Jun 52. B. N. Ivakin defended "Modeling of Micro- and Macrostructure of Waves in Non-homogeneous Media", before Dr Phys-Math Sci V. F. Bonchkovskiy, and Cand Phys-Math Sci V. I. Keylis-Borok on 31 Dec 52. M. L. Chelishvili defended "Magnetic Field of Models of Geological Structures" before Dr. Phys-Math Sci A. G. Kalashnikov, and Cand Phys-Math Sci G. N. Petrova on 28 May 52.

PA 241741

CHELISHVILI, M.L.

Laboratory apparatus for studying magnetic fields, and the solution of some problems in exploratory magnetometry by means of magnetic models.
Trudy Inst.geofiz.AN Gruz.SSR 14:37-59 '55. (MLRA 9:9)

1.Nauchno-issledovatel'skiy gidrometeorologicheskii institut, Tbilisi.
(Magnetism, Terrestrial--Electromechanical analogies)

CHELISHVILI, M. L.

37-11-1/18

AUTHOR: Chelishvili, M. L.

TITLE: Magnetic Field of Some Models of Geological Structures
(Magnitnoye pole nekotorykh modeley geologicheskikh struktur)

PERIODICAL: Trudy Nauchno-issledovatel'skogo instituta zemnogo magnetizma, 1957, Nr 11(21), pp. 3-32 (USSR)

ABSTRACT: The article discusses methods of investigating anomalous magnetic fields calculated for various geometric models, the construction of a new field-meter (polemer), and some problems of practical application. The following authors are referred to: Kazanskiy, A.P., Zamorev, A.A., Gamburtsev, G.A., Zaborovskiy, A.I., Kalashnikov, A.G., Fonton, S.S., Dolginov, S.Sh., Ozerskaya, M.L., Andreyev, B.A., Sluchanovskiy, A.S., Bakhurin, I.M., Roze, T.N., Malkin, N.R., Pudovkin, I.M., Popov, A.I., Petrova, G.N., Grabovskiy, M.A., Spiridovich, N.I., Logachev, A.A., Vonsovskiy, S.V., Akulov, N.S., Arkhangel'skiy, A. D. There are 15 figures, 9 tables, and 33 references, of which 28 are USSR, 1 German and 4 English.

AVAILABLE: Library of Congress
Card 1/1

CHELYSHVILI, M.L.

Anomalies of the vertical component of the magnetic field
intensity in Transcaucasia. Trudy Inst.geofiz.AN Grus.SSR 17:
81-92 '58. (MIRA 13:4)

1. Institut geofiziki AN GrusSSR, Tbilisi.
(Transcaucasia--Magnetic anomalies)

CHELISHVILI, M.L.; BOCHORISHVILI, N.Z.; PACHUASHVILI, R.I.

Magnetic properties of the manganese ores of the Chiatura deposit.
Soob. AN Gruz. SSR 35 no.3:549-552 S '64.

(MIRA 17:11)

1. Institut geofiziki AN GruzSSR. Predstavleno chlenom-korrespondentom AN GruzSSR M.M. Mirianashvili.

CHELISHVILI, M.L.; BOCHORISHVILI, N.Z.; PACHUASHVILI, R.F.

Magnetic field of the manganese deposits of the Mgvimevi upland.
Trudy Inst. geofiz. AN Gruz. SSR 22:6-12 '64.

(MIRA 18:12)

1ST AND 2ND ORDER		PROCESS AND PROPERTIES INDEX		3RD AND 4TH ORDER	
S	Oxygen Content of Steel in the Course of its Production in the Basic Open-Hearth Furnaces by Stakhanovite Methods. B. V. Stark and E. V. Chelishchev. (Metallurg, 1939, No. 7, pp. 17-31). (In Russian). The extensive investigation described was carried out to settle the question as to whether the intensification of the open-hearth process (with yields of up to 11 tons of metal per sq. m. of hearth) resulted in an increased oxygen content of the steel. The experiments consisted of taking samples of metal and slag at various stages of the process. The carbon, manganese and oxygen contents of the metal samples and the lime, silica, alumina, manganese oxide, magnesium oxide, the ferrous and ferric oxide contents and the viscosity of the slag samples were determined. The Herty method of determining the oxygen content using reduction with aluminum was employed, with the one modification, however, that the aluminum was introduced into the sampling pot, which was one similar to that used by Leibner. The results (plotted against time) showed that the average oxygen content in the heats investigated was 0.028%, and in no case did it exceed 0.040%. The oxygen content of the intensified heats tended, if anything, to be lower than in ordinary heats. It is concluded that the rate of carbon elimination is much higher than that of the migration of the ferrous oxide from the slag into the metal. The elimination of carbon was caused mainly by the oxides in the slag and not by the oxides in the metal.	7			
ASM-A.S.A. METALLURGICAL LITERATURE CLASSIFICATION					
100000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900		100000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900		100000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900	

NSA

Engineering

1375

ON THE ASSOCIATION OF A GENERALIZED INTEGRAL EQUATION WITH THE HYDRODYNAMIC THEORY OF HEAT EXCHANGE AND ON ITS APPLICATION TO CALCULATION OF HEAT EXCHANGE IN BOUNDARY-CONDITION PROBLEMS [IN FLUID FLOW]. B. V. Stark, E. Y. Chelapchev, and E. A. Kozachkov. *Izvest. Akad. Nauk S.S.S.R. Otdel. Tekh. Nauk*, 1983-5 (1981) Nov. (In Russian)

CHERNOV, YE. V.

USSR/Metals - Iron, Diffusion

Nov 51

"Diffusion of Elements in Molten Iron," B. V. Stark, Corr Mem, Acad Sci USSR Ye. V. Chelishchev, Ye. A. Kazachkov

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 11, pp 1689-1695

Expts demonstrated possibility of exptl detn of diffusion coeffs of various elements in liquid steel, iron and alloys. Application of special ceramic device eliminated convective mixing of liquid metal--phys phenomenon which usually

1957/100

USSR/Metals - Iron, Diffusion (Contd)

Nov 51

complicates investigation of diffusion processes. This factor makes results obtained much nearer to actual values.

1957/100

BCS

Refractories

1306. The production of magnesite crucibles for the melting of metal in Tasmann furnaces. —E. B. CHILINSKIY and E. A. KAZACHOV (*Ogneupor*, 16, 472, 1951). To avoid intensive accumulation of C in metal melted in Tasmann furnaces when the cast requires that the metal be kept in the crucible for 1-1.5 hr., magnesite crucibles of a special shape are used. These crucibles are made of powder obtained by crushing magnesite bricks, and can withstand 5-7 melts. The manufacturing process is described in detail. (3 figs.)

CHELISHCHEV, E. V.; VISHKAREV, A. F. (Engr.): ZHUKHOVITSKIY, A. A. (Prof., Dr. Chem. Sci.)

"Exchange and Distribution of Iron Between the Slag and Metal Phases in a Steel Smelting Process," in book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

E. V. CHELISHCHEV: A. F. VISHKAREV, Engr.; Prof. A. A. ZHUKHOVITSKIY, Dr. Chem. Sci., Scientific Consultant/Chair of Theoretical Metallurgy, Moscow Inst. Steel im I. V. Stalin.

CHELISHCHEV, Ye.V., dotsent, kandidat tekhnicheskikh nauk; VISHKAREV, A.F.,
resheniye.

Exchange and distribution of iron between the slag and metallic phase in
the steel smelting process. Sber. Inst.stali 34:128-145 '55.(MLRA 9:7)

1.Kafedra teorii metallurgicheskikh protsessov.
(Iron--Isotopes) (Steel--Metallurgy)

SOV/137-58-7-14455

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 74 (USSR)

AUTHOR: Chelishchev, Ye.V.

TITLE: Technological Peculiarities of Oxygen Smelting of Steel in a Recirculation Furnace (Osobennosti tekhnologii vyplavki stali v kislorodnoy retsirkulyatsionnoy pechi)

PERIODICAL: V sb.: Primeneniye kisloroda v metallurgii. Moscow, Metallurgizdat, 1957, pp 231-243

ABSTRACT: Under normal conditions of melting, the rate of burning of C in a recirculation furnace amounts to 2-3% per hour. In isolated instances this reaction occurs violently and produces a so-called "bump"; in this case the rate of burning of C may attain a value of 30-60% per hour. This type of furnace is recommended for smelting of various types of soft metal, in particular high-purity Fe. Normally, the primary slags contain 18.0-25% FeO and 7.0-11.0% Fe₂O₃. Toward the end of the working period, the content of the FeO and Fe₂O₃ in the slag attain values of 19.0-35% and 10.0-19.0%, respectively. In most instances the rate of burning of C amounts to 1.2-2.5% per hour; in individual cases it may attain a value of 3.00-3.24 or

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SOV/137-58-7-14455

Technological Peculiarities of Oxygen Smelting of Steel (cont.)

even 4.62% per hour. The rate of burning of C does not diminish even at small C concentrations in the bath of the furnace. Compared with open-hearth steel, the steel prepared by the method described contains less oxygen. This is explained by the counter-current which is created by the violent burning of C. If "bumps" occur, the violent combustion of C is followed by a sharp decrease in C content. Simultaneously, the O content in the metal falls below the normal value which corresponds to a given C content. The abundance of beads in the slag of O_2 smelting contributes to the combustion of impurities and favors the transfer of atmospheric oxygen into the hearth. Compared with the average C content of the beads, the C content of the hearth is more than twice as great. Assuming the mean diameter of the beads to be 1 mm, the calculated area of the slag-bead metal interface is $855 \text{ mm}^2/\text{t}$, or 1070 times greater than the specific surface of the slag-to-bath metal interface.

S.L.

1. Steel--Production 2. Furnaces--Performance 3. Oxygen--Metallurgical effects

Card 2/2

AUTHOR: Chelishchev, Ye.V., Candidate of Technical Sciences, Docent 67-58-3-2/18

TITLE: The Oxidation of Carbon and the Stirring of Metal in Oxygen Steel-Casting Furnaces (Okisleniye ugleroda i peremeshivaniye metalla v kislородnоy staleplavil'noy pechi)

PERIODICAL: Kislород, 1958, № 3, pp. 11-18 (USSR)

ABSTRACT: In the introduction it is said that in scientific publications data concerning this subject are contradictory (Ref 1-5), which fact is explained by the author by the difficulty of determining the composition of the casting in its various depths. In cooperation with engineer O.D.Zorin the author developed an apparatus (certificate Nr 106258) with the aid of which it is possible to take samples of steel castings in 3 different heights. The apparatus is described on the basis of a schematic drawing. Further, the casting furnace developed by M.A.Glinkov is mentioned as being especially well suited for research work. It has a double feed for fuel and for air. The fuel products pass along a loop-shaped path and leave the heating chamber in two directions. Feeding the oxidation substance to the metal is in this case carried

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The Oxidation of Carbon and the Stirring of
Metal in Oxygen Steel-Casting Furnaces

67-58-3-2/18

out through the slags and depends on oxygen current intensity:
 $q_0 = K_0 (O_{\text{atm}} - O_{\text{met}})$, where K_0 denotes the normal velocity of
oxygen supply, O_{atm} - oxygen concentration in the air chamber of
the furnace, and O_{met} - on the metal surface. Table 1 shows the
results obtained by means of 3 samples taken from an upper,
middle, and lower layer of the steel castings with respect to the
carbon- and oxygen content in three different sections of cast
iron. Table 2 contains the results obtained by means of samples
taken, while the metal was boiling, from 8 different parts of
the cast steel. These cases are dealt with separately and proc-
esses are explained on the basis of schematic drawings. In con-
clusion the following is said: 1.) The process of the oxidation
of carbon takes place within the range of diffusion and is lim-
ited by the feeding of oxygen through the slags in its range of
reaction. 2.) In liquid metal a considerable disparity of composi-
tions according to different depths was found to exist. 3.) The
greatest reaction of carbon oxidation was found to occur on the
boundary between slags and metal. By stirring this boundary can
be transferred to deeper layers of casting. 4.) As a consequence
of reaction the carbon content increases in the course of the

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The Oxidation of Carbon and the Stirring of
Metal in Oxygen Steel-Casting Furnaces

67-58-3-2/18

process in the direction from top to bottom (in the trough); the opposite is the case with the oxygen content. 5.) Stirring causes this rule to be disturbed. 6.) In an open-hearth furnace trough of 10 t vol. uniformity of composition by stirring can be attained within 3 minutes. 7.) Stirring accelerates the heating of the cast steel as well as oxidation of carbon. 8.) The above statements confirm the necessity of stirring in all types of casting furnaces. There are 11 figures, 2 tables, and 7 references, 5 of which are Soviet.

Library of Congress

1. Carbon--Oxidation 2. Steel--Production 3. Furnaces--Performance

Card 3/3

CHELISHCHEV, Ye.V., kand.tekhn.nauk, dots.

Distribution of iron oxides in the slag layer of the bath of a
500-ton open-hearth furnace. Izv.vys.ucheb.zav.; chern.met. 2
no.6:23-30 Je '59. (MIRA 13:1)

1. Moskovskiy institut stali. Rekomendovano kafedroy teorii
metallurgicheskikh protsessov Moskovskogo instituta stali.
(Open-hearth process)

CHELISHCHEV, E.V.; SABIEV, M.P.; ABROSIMOV, E.V.; GRIGORYEV, V.P.;
SUKHOTIN, B.N.; FEDOROV, L.S.

Issledovanie sostava metalla na otdelynykh
gorizontakh po vysote vanny 500-tonnoy
martenovskoy pechi.

report submitted for the 5th Physical Chemical Conference on
Steel Production.

MOSCOW 30 JUN 1959

CHELISHCHEV, Y.E.V.

Issledovanie sostoyaniya i sostava rasplavov v
prigranichnoy zone shtakovoy i metallicheskey
faz pri rafinirovani metalla v martenovskoy pechi.

report submitted for the 5th Physical Chemical Conference on
Steel Production.

MOSCOW 30 JUN 1958

CHELISHCHEV, V. V.

PHASE I BOOK EXPLOITATION

SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th,
Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii
(Physicochemical Bases of Steel Making; Transactions of the
Fifth Conference on the Physicochemical Bases of Steelmaking)
Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted.
3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni
A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy
of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg.
Tech. Ed.: V. V. Mikhaylova.

Card 1/16

Physicochemical Bases of (Cont.)

SOV/5411

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

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Physicochemical Bases of (Cont.)

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TABLE OF CONTENTS:

**PART I. MAKING STEEL IN OPEN-HEARTH
AND ELECTRIC FURNACES**

Chelishchev, Ye. V., M. P. Sabiyev, Ye. V. Abrosimov, V. P. Grigor'yev, L. F. Fedorov, and B. N. Sukhotin. Composition of Metal at Various Levels of the Bath in the 500-Ton Open-Hearth Furnace; the Decarburization of Steel	5
Chelishchev, Ye. V. The State and Composition of the Metal and Slag Interface-Adjacent Layers, and the Steel-Decarburizing Process in Open-Hearth Refining	12
Mikhaylets, N. S. Slag [Formation] Regime in Open-Hearth Melting and the Hydrogen Content in Steel	21

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S/148/61/000/003/002/015
A161/A133

AUTHORS: Chelishchev, Ye. V., Turkenich, D. I., Zhetvin, N. P., Tunkov, V. P.

TITLE: Investigating the metal composition on different levels of the open-hearth furnace bath

PERIODICAL: Izvestiya vysshikh uchebnykh. zavedeniy. Chernaya metallurgiya, no. 3, 1961, 31 - 36

TEXT: Two different views exist on the position of the decarbonizing reaction zone in the open-hearth furnace bath - according to the first this reaction takes place on the bottom according to the second on the metal-slag boundary. Large sampling devices always mixed the metal and caused different conclusions. The article presents information on an investigation carried out at the "Serp i molot" Plant with the aid of a new sampling device with a swiveling box and three 1-inch diameter pipes of different length, each pipe fitted with a metal shell on the end containing quartz metal receivers. A ball was blown on the receivers intake end and provided with a 1 mm diameter input hole that was plugged with aluminum. The aluminum melted after submersion and deoxidized metal filled the receiver. A spiral of aluminum wire in the receiver completed the deoxidation.

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Investigating the metal composition on different levels...A161/A133

Distances between the sampled metal levels were determined by the difference in length of the pipes. The carbon and oxygen contents indicated that the reaction takes place mainly in the transition layer between slag and metal spreading with the progress of carbon oxidation. The formation of the transition layer was verified on a model, and it was established that all the slag was absorbed by the metal at slag-to-metal layer depth ratio of 1:5 and a rimming intensity in the range of 0.3 and 0.6% C/h. The slag layer turned into a metal emulsion, and pure slag separated on the surface with an increasing slag quantity, or at a reduced carbon-burning rate. The slag layer in the investigated 50-ton furnace constituted 0.25 of the metal bath depth, which ensured a good intermixing of the metallic phase. Conclusions: 1) A definite regularity exists in the distribution of carbon and oxygen over the metal bath depth. The carbon content in the upper levels (particularly on the boundary with slag) is lower than in the deeper levels. Oxygen is distributed in an inverse way, and this proves that the de-carbonizing reaction goes on at the metal-slag boundary. 2) The maximum carbon concentration drop between the top and bottom of the 50-ton bath was 0.1%. In most of the cases the difference was lower, particularly at a low carbon content in the metal. Highest deviation of the carbon content from the mean in the metal volume was in the thin sub-slag layer. Sampling from this layer may cause differences in carbon determinations in the furnace and in teeming. 3) The intermixing

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S/148/61/000/003/002/015

Investigating the metal composition on different levels...Al61/Al33

of metal during the melting of low-carbon steel changes this sub-slag layer and may speed up decarbonization and reduce the carbon content. There are 5 figures and 1 Soviet-bloc reference.

ASSOCIATION: Moskovskiy institut stali i metallurgicheskoy zavod "Serp i molot"
(Moscow Steel Institute and "Serp i molot" metallurgical plant)

SUBMITTED: July 5, 1960

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Card 3/3

SEVRYUKOV, Nikolay Nikolayevich, prof., doktor tekhn. nauk; KUZ'MIN,
Boris Aleksandrovich, dots., kand. tekhn. nauk; CHELISHCHEV,
Yevgeniy Vasil'yevich, dots., kand. tekhn. nauk; GUDIMA, N.V.,
red.; KAMAYEVA, O.M., red. izd-va; MIKHAYLOVA, V.V., tekhn.
red.

[General metallurgy] Obshchaya metallurgiya. 2. izd., perer. i
dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i
tsvetnoi metallurgii, 1962. 583 p. (MIRA 15:2)
(Metallurgy)

CHELISHCHEV, Ye.V.

Determining the zone of preferential oxidation of carbon in a molten bath. Izv. vys. ucheb. zav.; chern. met. 5 no.5:51-55 '62. (MIRA 15:6)

1. Moskovskiy institut stali.
(Open-hearth process)
(Steel--Oxygen content)

S/137/61/000/011/018/123
A060/A101

AUTHORS: Chelishchev, Ye. B., Sabiyev, M.P., Abrosimov, Ye.V., Grigor'yev, V.P., Fedorov, L.F., Sukhotin, B.N.

TITLE: Metal composition at various levels of the vat of a 500-ton open-hearth furnace, and the decarbonizing of steel

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 27-28, abstract 11V183 (V sb. "Fiz-khim. osnovy proiz-va stali", Moscow, Metallurgizdat, 1961, 5 - 11)

TEXT: In order to determine the degree of stirring and homogeneity of metal composition at various points of the vat of a 500-ton open-hearth furnace, and also to determine the possibility of a further increase of the vat dimensions, a series of metal samples was taken from 11 heats. The samples were taken with the aid of a welded box-rod affixed to the pan of a charging machine. Three cha-
motte molds were mounted in the box, each containing quartz crucibles with Al wire. The C content varied between the limits of 0.1 and 1.0%; O content - 0.005 to 0.03%. The altitude variation in carbon content is of no practical significance. The altitude-variation of O content is very noticeable. In the ma-

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Metal composition ...

S/137/61/000/011/018/123
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majority of cases the O content at the upper levels of the vat is higher than that at the lower levels. In some cases at the upper levels of the vat the oxygen content is greater by a factor of 1.5 - 2.5 than at the lower ones. The authors consider that the experimental material obtained supports the viewpoint according to which the decarbonizing reaction takes place primarily at the upper levels of the metal at the metal-slag separation boundary. Samples of metal taken along the length of the 500-ton open-hearth furnace (10 heats) and of a 250-ton furnace (one heat) have shown that in the majority of cases the metal composition at any given level is practically homogeneous along the length of the vat. In individual cases sharp drops in the concentration of various elements were observed, connected with the additions of ore, Fe-Mn and other substances. In all the cases after the admixture was assimilated, the inhomogeneity of the vat content was liquidated. The distribution of the elements along the length of the 500-ton open-hearth furnace does not differ in principle from that of the 250-ton open-hearth furnace. The authors consider that a further increase in furnace capacity is possible by increasing the length and width of the vat.

V. Kudrin

[Abstracter's note: Complete translation]

Card 2/2

POLAND

CHELKOWSKA, Halina, First Pediatric Clinic (I Klinika Pediatryczna), PomAM [Pomorska Akademia Medyczna, Pomeranian Medical Academy] in Szczecin (Director: Prof. Dr. med. J. STARKIEWICZOWA)

"Marfan Syndrome in an Infant. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 24, 10 Jun 63, pp 863-865

Abstract: [Author's English summary] Author reports a case of a Marfan Syndrome in an infant 7-months old. The osseous circulatory and ophthalmic system were involved. Among other pathological symptoms, craniolacunia was also observed. There are 16 references, of which four (4) are in Polish, five (5) in German, and seven (7) in English.

1/1

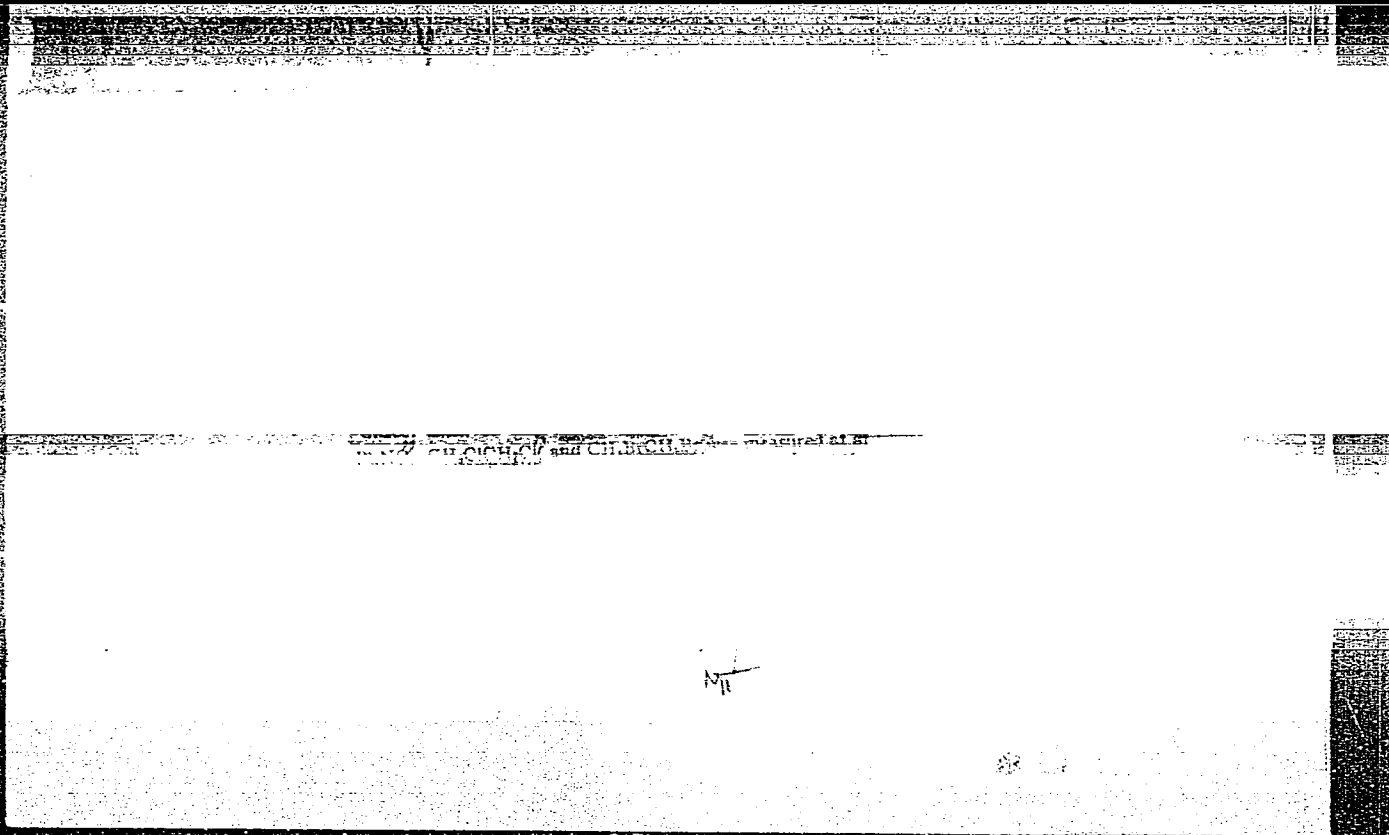
CHEŁKOWSKA, Halina

Uropapain excretion during prednisone and ACTH therapy of children with rheumatic fever. Pol. tyg. lek. 20 no.38: 1410-1412 20 S '65.

1. Z I Kliniki Pediatricznej Pomorskiej AM w Szczecinie (Kierownik: prof. dr. med. Julia Starkiewiczowa) i z Centralnego Laboratorium P.S.K. Nr. 1 w Szczecinie (Kierownik: dr. med. Halina Sliwinska).

"APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308320004-1



APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308320004-1"

CHELKOWSKI, A.

Distr: 4B2c(1)/4B3d

Dielectric saturation in pure polar liquids and their solutions. A. Chelkowski (Adam Mickiewicz Univ., Poznan, Poland). *J. Chem. Phys.* 28, 1240-50 (1958).—Satn. in *o*-nitrotoluene, *m*-nitrotoluene, and *o*-nitroanisole was measured, benzene being used as a solvent. Satn. in the 1st 2 liquids and their solns. depended on the concn., as in the case of PhNO_2 (C.A. 51, 1074g). In *o*-nitroanisole neg. values of the dielec. permittivity variations were observed at all concns. The dipole moment alone has no essential effect on the satn. effect. Henry Leidheiser, Jr.

5
2 May
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ref. R.

P/518/62/011/001/001/008
D207/D308

AUTHOR: Chełkowski, August

TITLE: Dielectric saturation and rotational isomerism of halogen derivatives of saturated hydrocarbons

SOURCE: Poznańskie Towarzystwo Przyjaciół Nauk. Komisja Matematyczno-Przyrodnicza. Prace. v. 11, no. 1, 1962. Fizyka dielektryków. no. 1, 3 - 33

TEXT: This paper was presented on October 19, 1961 at a meeting of the Komisja Matematyczno-Przyrodnicza PTPN (Mathematical and Scientific Committee, PTPN). The dielectric saturation (defined as $\Delta \epsilon$, the change of permittivity ϵ on application of a strong electric field) of some hydrocarbon liquids and their solutions was measured in order to find the relationship of this saturation to rotational isomerism. The liquids were: 1,2-dibromoethane and 1,2-dichloroethane; 1,3-dibromopropane and 1,3-dichloropropane; 1,4-dibromobutane and 1,4-dichlorobutane; 1,5-dibromopentane; 1,6-dibromohexane and 1,6-dichlorohexane; 1,8-dibromooctane; bromoethane; 1,1,2,2-tetrachloroethane; 1,2,3-trichloropropane; 1,2-dichloropropane. ✓

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Dielectric saturation and ...

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D207/D308

Carbon tetrachloride and benzene were used as solvents. Before tests the liquids were purified by double distillation and filtering through Al_2O_3 . After these treatments their electrical conductivity was $10^{12} - 10^{-13} \text{ ohm}^{-1} \cdot \text{cm}^{-1}$. The permittivity was deduced from high-frequency capacitance measured using a two-tube bridge circuit and a galvanometer detector. The apparatus was the same as used earlier for measurements in magnetic fields (A. Piekara and A. Chełkowski, 9th Coll. Ampere, 12, 1960); its capacitance sensitivity was $\Delta C/C = 10^{-8}$. Electric fields up to 10 kV/cm were applied to the liquids and $\Delta \epsilon/\epsilon$ values ranged from 10^{-6} to 10^{-4} . It was found that the dielectric saturation of 1,n-dihalogen derivatives of saturated hydrocarbon was different in molecules with (I) even and (II) odd number of carbon atoms in the chain. In case I, $\Delta \epsilon$ decreased from positive to zero and then to negative values along a series from 1,2-dihalogenethane to 1,8-dihalogenoctane, i. e. as the number of carbon atoms in the chain increased. In case II, $\Delta \epsilon$ increased as the number of carbon atoms increased from 1,3-dihalogenpropane to 1,5-dihalogenpentane. In the case of the satu-

Card 2/3

Dielectric saturation and ...

P/518/62/011/001/001/008
D207/D308

rated 1,n-dihalogen derivatives and in the case of 1,1,2,2-tetrachloroethane and 1,2-dichloropropane the saturation was clearly related to rotational isomerism. The results were in good agreement with A. Piekara's theory which allows for the dipole-dipole interactions. Acknowledgement is made to Professor Doctor A. Piekara, who is in charge of the Experimental Physics Department, A. Mickiewicz University, Poznań. There are 26 figures and 6 tables.

ASSOCIATION: Katedra Fizyki Doświadczalnej Uniwersytetu im. A. Mickiewicza w Poznaniu (Department of Experimental Physics, A. Mickiewicz University, Poznań)

✓

Card 3/3

CHELKOWSKI, A.

Effect of an electric field on the dielectric permittivity
of dipole liquids. Acta physica Pol 24 no.2:165-189 Ag '63.

1. Institute of Experimental Physics, A. Mickiewicz University,
Poznan.

ZODROW, Karol; STEFANIAK, Ojcumila; CHELKOWSKI, Jerzy; MALINSKA, Emilia

Isolation of corrinoids from soil. Acta microbiol. pol. 11 no.4:
341-347 '62.

1. From the Department of Agricultural Microbiology, Agricultural
College in Poznan.

(SOIL MICROBIOLOGY) (VITAMIN B 12)

ZODROW, Karol; STEFANIAK, Ojcumila; CHELKOWSKI, Jerzy;
SZCZEPSKA, Katarzyna

Influence of Ca-pantothenate and biotin on the growth and
biosynthesis of corrinoids by Propionibacteria. Acta microbiol.
pol. 12 no.4:263-266 '63.

1. From the Department of Agricultural Microbiology, College
of Agriculture, Poznan.

(PANTOTHENIC ACID) (BIOTIN) (CULTURE MEDIA)
(PROPIONIBACTERIUM)

ZODROW, Karol; CHELKOWSKI, Jerzy; STEFANIAK, Ojcumila; CZARNECKA, Danuta

The effect of different casein hydrolysates on the growth and biosynthesis of corrinoide by Propionibacteria. Acta microbiol. pol. 12 no.4:259-262 '63.

1. From the Department of Agricultural Microbiology, College of Agriculture, Poznan.

(CASEIN) (PROTEIN HYDROLISATES)
(CULTURE MEDIA) (PROPIONIBACTERIUM)

CHELLEY, S.F.

The SMU-0,5 hay stacker and loader. Biul. ~~tekh.~~-ekon.inform.
no.1:63-65 '62. (MIRA 15:2)

(Hay--Harvesting)

CHELLEY, S.F.

The ZS-60 grain loader. Biul.tekh.-ekon.inform. no.2:60-61
'62. (MIRA 15:3)
(Grain-handling machinery)

CHELLEY, S.F.

The ZhVN-6 mounted windrower. Biul.tekh.-ekon.inform. no.2:
63-64 '62. (MIRA 15:3)
(Harvesting machinery)

CHellini, B.S.

KLIMOV, M.N.; CHELLINI, B.S., inzhener; LANDA, Ye.F., inzhener.

New method of joining kersey. Tekst.prom.16 no.11:50-51 N '56.

(MIRA 9:12)

1. Master kombinata "Trekhgornaya manufaktura" imeni Dzhershinskogo
(for Klimov). 2. Zavod "Kauchuk" (for Chellini and Landa).
(Textile printing—Equipment and supplies)

CHEIMAKINA, V.P.

Expediency of the use of exchange transfusion of blood in acute poisoning with atropine, related poisons and with reserpine. Probl. gemet. i perel. krovi 9 no.5:27-30 My '64.
(MIRA 18:3)

1. Kafedra patologicheskoy fiziologii (zav.- prof. O.S. Glozman)
Alma-Atinskogo meditsinskogo instituta.

CHELMICKA-KIZLICH, Ewa; WARECKA, Krystyna

A case of dermatomyositis in a 7-year-old girl. *Pediat. Pol.*
40 no.10:1117-1121 O '65.

1. Z Kliniki Neurologicznej AM w Warszawie (Kierownik: prof.
dr. med. I. Hausmanowa-Petrusewicz).

CHERMIK, O

"The first generators using hydrogen for cooling in the Polish power industry", p. 169
Vol. 7, no. 4, July/Aug. 1953. Stalingrad. (Energetyka)

Vol. 3, No. 3
SO: Monthly List of East European Accessions, Library of Congress, March 1954, Uncl.

CHELMICKI, O.

Investments in electric-power plants are a matter of the Ministry of Power. p.6.

(ENERGETYKA. Vol. 11, No. 1, Jan./Feb. 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) IC. Vol. 6, No. 10, October 1957. Uncl.

CHELMICKI, O.

Skawina and Blachownia, the largest electric-power plants of the first Five-Year Plan in Poland. p. 33.

ENERGETYKA. (Ministerstwo Gornictwa i Energetyki oraz Stowarzyszenie Elektrykow Polskich) Bytom, Poland
Vol. 13, no. 2, Feb. 1959.

Monthly list of East European Accessions Index (EEAI), LC, Vol. 8, no. 6,
June 1959
uncla.

POL. A

Experiments on sorbose. Józef Jeske, Franciszek Kukul, Leonidas Samochowiec, Jadwiga Białhorn, and Jan Chelmin (Zakład Farmakol. Exptl. Śląskiej Akad. Med., Zabrze-Rokitnica). *Acta Polon. Pharm.* 11, 255-63(1964). Guinea pigs, 250-400 g. body wt., in which scurvy developed by feeding a special vitamin C (I)-deficient diet, died in spite of the supplementary feeding of 5-20 mg. sorbose (II)/100 g. body wt. II is not a precursor of I in guinea pigs. Men (18) and dogs (20), after administering II in the amt. of 0.25-1.00 g./kg. body wt. (to men orally and to dogs orally and by intramuscular injection, 5-10% II soln.), showed only a slight increase of blood-sugar concn., about 10 and 20 mg.%, resp. However, after administering II by intravenous injection to dogs (with 20% II soln.) the blood-sugar concn. increased rapidly about 100 mg.% and remained at this level for approx. 3 hrs.; only after this period of time first traces of II appeared in urine. The amts. of II not assimilated by men and dogs averaged 11.1 and 19.3% of the II administered, resp. The degree of assimilation of II administered to dogs did not depend on either the manner of supplying II or on the size of the dose used (within the limits of 0.25 and 1.00 g. II/kg. body wt.). The amt. of I excreted in urine and the concn. of blood I were not affected by the administration of II or glucose. II had no effect on blood pressure, respiration, or diuresis as found in dogs and rabbits; II also had no pharmacol. effect on the isolated intestine and matrix of guinea pigs. II was toxic in the amt. of 10 g./kg. body wt. and above; the lethal dose was 30 g. II/kg. R. Wierbicki

KOKOT, Franciszek; ~~CHMELIN~~, Jan.

Role of vitamin B in the insular system. Acta Poloniae
pharm. 12 no.4:213-218 1955.

1. Z Zakładu Farmakologii Eksperymentalnej Śląskiej A.M.
Zabrze-Rokitnica. Kierownik: doc. dr. J. Jeske.

(VITAMIN B, effects,

on blood sugar)

(BLOOD SUGAR, effect of drugs on,
vitamin B)

KOKOT, Franciszek; ZAJUSZ, Kazimierz; CHELMIN, Jan

Effect of prolonged administration of barbiturates on sugar curve and on histological picture of islands of Langerhans in rats. Pat. polska 7 no.3:241-246 July-Sept 56.

1. Z Zakladu Farmakologii Eksperymentalnej Slaskiej A.M. Zabrze-Rokitnica, Kierownik: doc. dr. J. Jeske, 1 z Zakladu Histologii i Embriologii Slaskiej A.M. Zabrze-Rokitnica Kierownik: prof. dr. T. Pawlikowski, Zabrze, K. Marksa 19.

(BARBITURATES, effects

on blood sugar & islands of Langerhans in rats (Pol))

(BLOOD SUGAR, effect of drugs on,
barbiturates in rats (Pol))

(ISLANDS OF LANGERHANS, effect of drugs on,
same)

CREATININ, JHN

Effect of a single infusion of dextran upon renewal of blood-serum proteins in bled dogs. Franciszek Kokot, Józef Jeske, and Jan Chełmni (Zakł. Farm. Wrocław). *Acta Polon. Pharm.* 13, 199-204 (1956) (English summary).

The quantity of dextran transfused into thoroughly bled dogs was equal to the vol. of drained blood. The expts. disclosed that dextran does not retard the renewal of the total quantity of blood-serum proteins. The proteins reached the initial level at approx. 120 hrs. after the infusion; although the level of total proteins was the same after 120 hrs., the

proportion of α -, β -, and γ -globulins was significantly different.

Richard Ehrlich

CHELMINOWA, Wiktoria (Bytom, ul. Witczaka 188.)

A case of Waldenstrom macroglobulinemia. Polski tygod. lek. 13 no.28:
1083-1086 14 July 58.

1. Z Oddzialu Chorob Wewnetrznych Szpitala nr 1 w Bytomiu; ordynator:
dr med Zygmunt Mlynarski.

(SERUM GLOBULIN.

macroglobulinemia of Waldenstrom, case report (Pol))

Distr: 4E3d

Prace Instytutu
Metaloznawstwa

Vol. 10, Nr 1, 1958

S. Orzechowski and H. Chelmińska

INVESTIGATIONS OF COOLING PROPERTIES OF HARDENING OILS

Summary

Investigations were made of seven types of mineral hardening oils, with regard to establish a rapid and simple method of determining cooling properties of oils for choosing and control purposes of oils in industrial hardening workshops. Trials were made with previously established methods of Grossmann and Asimow, Russell's and the calorimetric method, which is a variety of the five-seconds method. Investigations made by the method of Grossmann and Asimow consisted in hardening of various dimensions of rolled test pieces of 35H4M steel in oils, the hardness tests of sections of these pieces and computation of hardness diagrams (curves H). The obtained data enabled the determining of the cooling coefficient H . The results obtained in these trials correspond with the data given in Grossmann's paper. The results obtained by the method of Grossmann were then checked and interpreted by the method of Russell, and the Russell's coefficient h determined. It was found, that both coefficients

H and h depend on the diameter of the test piece, and of the relative distance of the considered point from its axis. On the base of results obtained by Russell's method the investigated oils were divided into three groups comprising different cooling properties. As well, the method of Grossmann and Asimow, as the interpretation of results by the method of Russell did not give accurate results, due to the scattering of hardness in test pieces and also a too great simplifications of these methods. The results of trials of cooling properties of oils by the calorimetric method for 5 to 25 seconds, which consists in immersion of a steel or silver ball in oil, which is in calorimeter, were also not wholly satisfactory. A detailed analysis of results of these experiments was made and it was concluded that, in order to work out a simple and easy method for determining the cooling properties of oils, further investigations are necessary.

CHELMINSKA, H.

2

✓ Cooling properties of hardening oils, S. Orzechowski and H. Chelminska, *Prace Inst. Hutnik.* 10, 17-27(1958) (English summary).—Seven mineral hardening oils were used to establish a rapid and simple method for predicting the cooling properties of oils used for hardening. The sp. gr., C residue, Engler viscosity at 50°, flash point, fire point, acid no., and coke content of these oils were, resp.: (A) 0.899, 0.16%, 3.4°, 196°, 213°, 0.11, 0.097%; (B) 0.901, 0.42%, 2.7°, 184°, 205°, 0.28, 0.17%; (C) 0.914, 0.16%, 3.8°, 200°, 225°, 0.054, 0.14%; (D) 0.887, 0.18%, 2.5°, 200°, 223°, 0.15, 0.18%; (E) 0.895, 0.06%, 1.8°, 170°, 188°, 0.03, 0.15%; (F) 0.874, 0.13%, 1.3°, 121°, 139°, 0.056, 0.18%; (G) 0.900, 0.15%, 2.2°, 178°, 202°, 0.12, 0.16%. The heat transfer coeff. was defined by the Grossmann-Asimov method (cf. G., *et al.*, *C.A.* 32, 3736; 37, 1968). Test cylinders with polished surfaces and varying diams. (20, 25, 30, 35, 45, and 60 mm.), but with a const. diam. to length ratio of 1:3, were prep'd. from rolled or forged bars of 35 HM Cr-Mo steel contg. C 0.32, Mn 0.68, Cr 0.96, and Mo 0.17%. The exptl. results were highly scattered and are considerably higher than those given by Grossmann. The cooling intensity coeff. H was not const. for a given cooling medium. The results were checked by the Russell method (cf. R., *et al.*, *Iron Steel Inst.* (London) *Spec. Rept.* No. 36, 25, 34(1946)) in order to det. the relation between H and the ratio r/b (r = the distance of a given point from the axis, b = diam. of specimen) and were calcd. for r/b = 0, 0.5, and 0.9. These data showed better correlation, agreed with those of Grossmann within a very narrow range, and enabled the grouping of the oils. Thus, oils A, B, C, and D are rated equally as poor cooling media, B and G are somewhat better for use on specimens of 20 and

S. Czocher, H. Chodura

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25 mm. in diam. P is a highly effective cooling oil giving highest H values under all exptl. conditions. It has been successfully used in hardening vehicle parts and can also be used in workshops for hardening tools and small construction elements. Results of testing by an improved calorimetric method (5-sec. or Gill method, *et al.*, *Tool Steels*, 1944 (C.A. 38, 2821¹)) were also not satisfactory. Cylindrical specimens, 25.4 mm. in diam. and 63.5 mm. long, and a ball, 3 mm. in diam., made of heat-resistant steel contg. 22% Ni and 22% Cr, and a Ag ball were heated to 800° in air and immersed in an H₂O calorimeter of 20° wall temp., and 30° initial oil temp. for 5-25 sec. The results obtained were scattered, which was probably due to a thin layer of oxides deposited on the steel through oxidation. With Ag specimens the scatter of the results starts at >15 or 20 sec. Exptl. conditions excluded the effect of inaccurate detn. of starting time, of the course of the 2nd cooling phase and of the flashing of the oil after immersion of the test specimen. It is suggested to refine the Gill method, to measure the time required for removal of half of the heat of the ball, and to discard the other two methods following a review and discussion of their characteristics. A method for calcg. H values is given. 23 references. Mordecai Medwed

JB
1/2

Emm

S/138/62/000/002/006/009
A051/A126

AUTHORS: Lepetov, V.A.; Chelmodeyev, A.D.

TITLE: Determination of the optimum time of vulcanization by measuring the static compression modulus of rubber

PERIODICAL: Kauchuk i rezina, no. 2, 1962, 34 - 36

TEXT: The compression modulus of rubber was used to calculate the optimum vulcanization time, since this index is found to depend on the degree of vulcanization to the greatest extent. The following determinations were made: the relative and residual elongation, expansion moduli [ГОСТ 270-53 (GOST 270-53)], tensile strength (GOST 262-53), swelling (GOST 421-41), bound sulfur (from the unbound residual), hardness according to TM-2 (TM-2) (GOST 263-53) of rubber. Mixtures of NR, CKC-30A (SKS-30A), CKH-26 (SKN-26) and nairite, were used to determine the optimum vulcanization time. The ДМ-2 (DM-2) "defometer" was used to determine the conditional-equilibrium load in static compression of the sample by 20%, applying only the mechanical part of the instrument. The conditional-equilibrium static compression modulus E was determined according to the formula:

$$E = \frac{P_{\text{stat.}} \cdot h_1}{S_0 (h_0 - h_1)} \text{ kg/cm}^2, \quad (1)$$

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Determination of the optimum time of vulcanization ... 9/138/62/000/002/006/009
A051/A126

where P_{stat} is the load of the static equilibrium state in kg, S_0 - the initial cross-section of the sample in cm^2 , h_0 - the initial height of the sample in cm, h_1 - the height of the sample under load at the time of reaching the static conditional-equilibrium state in cm. The parameters of (1) are found experimentally. The variation coefficient was determined according to the formula:

$$V = \frac{\sigma}{\bar{x}} \cdot 100 \%, \quad (2)$$

where \bar{x} is the arithmetic mean, σ - the quadratic mean deviation equaling:

$$\sigma = \pm \sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}},$$

where \bar{x}_1 is the result of the test, n - general number of tests. Obtained data showed that the suggested method for determining the optimum vulcanization method results in a lesser scattering of the indices. The method is said to be applicable to the determination of the optimum vulcanization time of all the investigated rubbers. A saving of rubber (up to 64%) is accomplished, consumption of energy and work of the technician is reduced. There are 2 tables, 1 figure and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosov (Moscow Institute of Fine Chemical Technology im. M.V. Lomonosov)

Card 2/2

BOGAYEVSKIY, A.P.; ZHEREBKOV, S.K.; GROZHAN, Ye.M.; CHELMODEYEV, A.D.

Investigating the chemical stability of some natural rubbers
and rubber goods produced on their base. Kauch.i rez. 21
no.12:11-14 D '62. (MIRA 16:1)

1. Nauchno-issledovatel'skiy institut resinovoy promyshlennosti.
(Rubber—Testing)

BOGAYEVSKIY, A.P.; ZHEREBKOV, S.K.; GROZHAN, Ye.M.; POLYAKOVA, L.M.;
CHELMODEYEV, A.D.

Investigating the chemical stability of the SKI-3 isoprene
rubber and of the rubber and ebonite based on it. Kauch. i
rez. 23 no.1:3-7 Ja '64. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut rezinovoy promysh-
lennosti.

CHELMOKHAYEVA, S. S.

15-57-2-1278

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 2,
p 11 (USSR)

AUTHORS: Semikhatova, Ye. N., Lazareva, Ye. P., Chelmokayeva,
S. S.

TITLE: New Data on the Stratigraphy of the Lower Tertiary
Deposits in the Stalingrad Volga District (Novyye
dannyye k stratigrafii nizhnetsvetichnykh otlozheniy
Stalingradskogo Povolzh'ya)

PERIODICAL: Uch. zap. Rostovsk.-na-Donu un-ta, 1954, Vol 23, Nr 5,
pp 93-97

ABSTRACT: Bibliographic entry

Card 1/1

POLAND

CHELMONSKA, Bronislawa, GALUSZKA, Halina, and LISIECKI, Jerzy, Chair of General Animal Breeding (Katedra Ogolnej Hodowli Zwierzat), WSR [Wyzsza Szkola Rolnicza, Higher School of Agriculture] in Wroclaw and the Chair of High Tensions (Katedra Wysokich Napiec) of the Polytechnical Institute (Politechnika) in Wroclaw.

"Electroejaculation in Drakes."

Warsaw-Lublin, Medycyna Weterynaryjna, Vol 13, No 12, Dec 62, pp 712-714.

Abstract: [Authors' English summary modified] Materials, procedure, and results are given for a study of electroejaculation in drakes. The concentration of spermatozoa and the quantity of semen collected were higher with electroejaculation than with hand massage. There are seven references, of which one is Italian and six are English.

1/1

CHELMONSKI, B.

Producers' information service and the consumers' needs. p. 23. (TECHNIKA
MOTORYZACYJNA, Vol. 4, No. 1, Jan 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec.
1954, Uncl.

CHELMONSKI, J.

"Soviet telecommunication in the service of communism." p. 365.
(PRZEGŁAD TELEKOMUNIKACYJNY. Vol. 27, No. 12, Dec. 1954. Warszawa, Poland)

SO: Monthly List of East European Accessions. (REAL). LC. Vol. 4, No. 4,
April 1955. Uncl.

CHEIMONSKI, Jozef, mgr inz.

Graphic-analytical method of determining the influence of element losses on the effective attenuation in transmission bands of low-pass and band-pass filters. Prace Inst teletechn 5 no.3:3-38 '61.

1. Biuro Konstrukcyjne Panstwowych Zakladow Teletransmisyjnych, Warszawa.

CHELMOWSKI, K.

Polish Technical Abst.
No. 4, 1953
Transport

2486

629.113--2 : 653.53

Chelmowski K. Planning the Supply of Spares.

„Planowanie zaopatrzenia części zamiennych”. Motoryzacja, No. 3, 1953, pp. 49—52.

Factors which create difficulties in planning the supply of spares for repairing motor vehicles. Standards for wear, standards for stocks and production plans as basic elements of supply planning. The role of accidental wear in vehicle parts; contingency of the rate of wear on the vehicle operation stage. The author suggests that a balancing stock of spares be carried, in addition to the minimum stock limit.

DUMITRACHE, Gheorghe, ing.; CHELMU, Mihai, ing.

Mechanisms for adjustment of cylinders in the housings of
sheet billet rolling mills. Metalurgia si constr mas 15
no.3:226-227 Mr '63.

CHELMU, SIIU/A

1. "Occupational Cancer of the Integuments Caused by Tar, Bitumen and Its Derivatives," Prof F. MANU; pp 1-11.
2. "Pollution of the Atmosphere in the Vicinity of an Electrical Power Station," N. ZAPRUDOV, St. G. KRAVCHENKO, Dr V. BARZDA, Dr T. KRAVCHUK, St. MANU, E. NIDIO and St. DIADICHEN; pp 1-11.
3. "Notes on the Supply of Drinking Water in Rural Areas by Means of Small Central Supply Units (Microcentral Units)," Dr T. STOPIAN and Dr Feliks GRABARDOL; pp 19-23.
4. "Experimental Investigations on the Toxicity of Certain Chemical Substances Used in the Manufacture of Organic Oils (Plexiglass)," Dr Sylwia GABOR, Dr C. RUCHER, Mrs EDOK and Polina GELBER, work performed at the NRI Institute of Hygiene and Public Health (Institute of Hygiene at Sanitate Publica NRI), Bucharest; pp 27-30.
5. "Investigations Concerning Influences of Ionizing Radiations on the Nutritive Value of Proteins and Lipids in Canned Milk," Dr A. STON, Dr N. MAROVANU, Dr Eugenia ORESCU-GALINSCHU, work performed at the NRI Institute of Hygiene and Public Health (Institute of Hygiene at Sanitate Publica NRI), Bucharest; pp 31-39.
6. "New Aspects Regarding the Use of Clostridium velochii bacterium as Sanitary Indicator for Food Products," Dr Cornelia IERISTEA; pp 41-48.
7. "The Use of Plant Tests in Food Toxicology," Stina SYRICA-SILVERZAR, Dr A. JIDRY and Sylwia GELBER, NRI Institute of Hygiene and Public Health (Institute of Hygiene at Sanitate Publica NRI), Bucharest; pp 49-53.
8. "A Few Observations on Tube Collimetry," Dr M. ZARVA and Dr Radu-Mihail IMHEN; pp 55-60.
9. "Radioactive Pollution of Natural Water Reservoirs," Dr On. ZANOFIN; pp 61-65.

— 4/8 —

CHELMU, S.

MINCU, P.

IONESCU - continued

ROMANIA

KD

Bucharest, Igiena. Revista de Igiena si Sanitate Publica A Uniunii
Societatilor de Stiinte Medicale din Republica Populara Romina,
No 4, July-August 62, pp 221-226.

"Research on the Pollution of Air with Microorganisms and Dust in
Hospitals."

CHELMU, Silvia, Biologist.

2 of 2

ACC NR: AM6004820

(A)

Monograph

UR/

Shadur, Leonid Abramovich (Doctor of Technical Sciences, Professor); Chelnikov, Ivan Ivanovich (Doctor of Technical Sciences, Professor); Nikol'skiy, Lev Nikolayevich (Doctor of Technical Sciences, Professor); Nikol'skiy, YEvgeniy Nikolayevich (Doctor of Technical Sciences, Professor); Proskurnev, Petr Grigor'yevich (Candidate of Technical Sciences, Docent); Kazanskiy, Georgiy Alekseyevich (Candidate of Technical Sciences); Devyatkov, Vladimir Fedorovich (Candidate of Technical Sciences)

Railroad cars; construction, theory, and design (Vagony; konstruktsiya, teoriya i raschet) Moscow, Izd-vo "Transport", 1965. 439 p. illus., biblio. 8,000 copies printed. Textbook for railroad transportation institutes.

TOPIC TAGS: railway equipment, railway rolling stock, railway transportation, railway vehicle data

PURPOSE AND COVERAGE: The book deals with the construction, strength calculations, dynamics, choice of technical-economic parameters, and sizes of railroad cars. It is intended for courses on "Railroad Cars" (construction, theory, calculation) for those specializing in "Railroad Car Construction and Railroad Car Management" of higher technical institutes for railway transport. It is designed to be a basic course for further specialization in special-purpose cars such as refrigerator cars, electric equipment of railroad cars, technology of construction and repair of railroad cars, and other specialties. It is designed for students who have some elementary information on car construction and car strength.

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Card 2/2

CHELODKOV, A.A., inzhener.

Raise the technical level of the construction of peat enterprises and introduce plowing for the preparation of new fields. Torf.prom.33 no.4:22-24 '56. (MLRA 9:9)

1.Stroyupravleniye Belaya Vaka.
(Peat industry)

CHELNOKOV

Ramp loading of ballast by bulldozers. Torf. prom. 34 no.3:
39 '57. (MIRA 10:5)

1. Stroyupravleniye Belaya Baka.
(Loading and unloading) (Ballast)

CHELNOKOV, A.F., Cand Tech Sci -- (diss), "analysis of causes
of ~~degradation~~ ^{wear} of certain parts of ~~aircraft~~ ^{aircraft} engines and methods
of ~~improving~~ ^{increasing} their ~~reliability~~ ^{wear resistance}." Kiev, 1957 14 pp with ill.
(Kiev Inst of Civil ~~Air~~ Air Fleet). 200 copies (KL,38-59, 118)

53

CHELNOKOV, A., podpolkovnik

A nomogram for determining the length of day and light time of the day.
Voenn. vest. 43 no.12:105-107 D '63. (MIRA 17:2)

, 15(2); 18(1, 2, 3); 25(2) PHASE I BOOK EXPLOITATION SOV/3406

Chelnokov, Andrey Filippovich

Povysheniye iznosoustoychivosti detaley mashin (Increasing the Wear Resistance of Machine Parts) Kiyev, Gostekhizdat USSR, 1959. 27 p. 1,500 copies printed.

Ed.: L. Raytburd; Tech. Ed.: K. Gusarev.

PURPOSE: This booklet is intended for scientific and for engineering and technical personnel connected with the production, repair, and operation of machines.

COVERAGE: This booklet describes the effects of the graphite content on the wear of graphitized metallic-ceramic materials and the effect of chemical and heat treatment of steel on its resistance to seizing. The operating conditions which ensure a high resistance to wear of rubbing surfaces of parts made from the materials investigated are defined. The booklet contains the results of investigations of the effect of specific technological factors on wear due to heat and wear due to seizing of the first kind in sealing components of aircraft engines. Practical recommendations are included for increasing the wear resistance not only of aircraft engine parts, but also of other machines. There are 13 references; 12 Soviet and 1 English.

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Increasing the Wear (Cont.)

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AVAILABLE: Library of Congress

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AC./lsb
4-8-60

CHELNOKOV, A. M.

"Organisation and Planning in USSR Shipbuilding Enterprises," State Publ.
House for Shipbuilding Lit., Leningrad, 1953

Translation No.593, 18 Sep 56

CHELNOKOV, A.M.

3649. CHELNOKOV, A.M. Organizatsiya i planirovaniye sudostroitel'nogo predpriyatiya. Posociye po Kursovomu proyektirovaniyu. L. 1954. 188s. s. gral; 8l. ill. 20sm. (Leningr. Koraclestroit. in-t) 200ekz. Bespl.-(54-57713) 629.12.002:658.5

SO: Knishnaya Letopis', Vol. 3, 1955

CHEINOKOV, A. M.

N/5
743.4
.C51

Organizacja i planowanie pracy stoczni (Organization and planning of a ship building enterprise) Warszawa, Wydawnictwa Komunikacyjne, 1955.

412 p. illus., diags., tables.

Bibliographical footnotes.

Translated from the Russian: Organizatsiya i planirovaniye sudostroitel'nogo predpriyatiya.

CHELPOKOV, A.M., kandidat tekhnicheskikh nauk.

Simplification of planning within the industry. Sudostroyeniye 22
no.2:19-22 F '56. (MIRA 9:7)
(Shipbuilding) (Industrial management)

CHERNOMIR
CHERNOMIR, A.M. kand. tekhn. nauk.

Economic indices in shipbuilding. Sudostroenie 22 [1.9.23] no.10:37-
40 0 '57. (MIRA 11:2)

(Shipbuilding--Costs)

CHELNOKOV, A.M., kandidat tekhnicheskikh nauk.

Consolidated work norms for shipbuilding operations. Sudostroenie 23
no. 5:43-48 My '57. (MIRA 10:6)
(Shipbuilding) (Wages)

CHELNOKOV, Aleksey Mikhaylovich; SAGARDA, A.A., dotsent, kand.tekhn.
nauk, retsenzent; SATANOVSKIY, Ya.S., inzh., retsenzent;
KRASNIKOV, K.P., nauchnyy red.; KUSKOVA, A.I., red.; TSAL,
R.K., tekhn.red.

[Organizing and planning a shipbuilding enterprise] Organi-
zatsiya i planirovaniye sudostroitel'nogo predpriyatiya.
Leningrad, Gos.soyuznoe izd-vo sudostroit.promyshl., 1959.
430 p. (MIRA 12:10)

(Shipbuilding)